

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended) A computer-implemented method of providing
2 information to a user based upon contents of a first document displayed to the user, the method
3 comprising:
4 identifying at least a first section of the first document;
5 extracting a first set of one or more information objects from the first section of
6 the first document, the first set of information objects comprising at least a first information
7 object comprising information of a first type, wherein the first information object is one of an
8 audio object, a video object, or an image object;
9 ~~determining degree of relevancy information for a second set of one or more~~
10 ~~information objects, the processing information objects in the first set of information objects and~~
11 ~~information objects in a second set of information objects to determine a degree of relevancy~~
12 information indicating the relevancy of information objects in the second set of information
13 objects to information objects in the first set of information objects, wherein the second set of
14 information objects comprises at least one information object comprising information of a second
15 type, wherein the second type is different from the first type, and wherein determining the degree
16 of relevancy information comprises determining a degree of relevancy of the at least one
17 information object to the first information object from the first set of information objects; and
18 selecting a third set of one or more information objects from information objects
19 in the second set of information objects based upon the degree of relevancy information
20 determined for information objects in the second set of information objects, wherein information
21 objects in the third set of information objects store information to be output to the user when the
22 first document is being displayed to the user.

1 2. (Previously Presented) The method of claim 1 wherein the first section of
2 the first document corresponds to a section of the first document displayed to the user, wherein
3 the section of the first document displayed to the user is less than the entire first document.

1 3. (Previously Presented) The method of claim 1 wherein the first section of
2 the first document corresponds to the entire first document.

1 4. (Previously Presented) The method of claim 1 wherein extracting the first
2 set of information objects from the first section of the first document comprises:

3 for each information object in the first set of information objects:
4 identifying a type of the information object based upon contents of the
5 information object;
6 determining a first content recognition technique based upon the type of
7 the information object; and
8 applying the first content recognition technique to the information object
9 to determine information related to the contents of the information object.

1 5. (Previously Presented) The method of claim 1 wherein:
2 determining the degree of relevancy information for the second set of information
3 objects comprises:

4 identifying a plurality of selection techniques for determining the degree
5 of relevancy information; and

6 for each selection technique in the plurality of selection techniques,
7 applying the selection technique to generate relevancy scores for the information objects in the
8 second set of information objects, the relevancy scores indicating the relevancy of information
9 objects in the second set of information objects to information objects in the first set of
10 information objects calculated using the selection technique; and

11 selecting the third set of information objects comprises:

12 selecting one or more information objects from the second set of
13 information objects to be included in the third set of information objects based upon the
14 relevancy scores for information objects in the second set of information objects calculated using
15 the plurality of selection techniques.

1 6. (Previously Presented) The method of claim 5 wherein selecting the one
2 or more information objects from the second set of information objects to be included in the third
3 set of information objects based upon the relevancy scores for information objects in the second
4 set of information objects calculated using the plurality of selection techniques comprises:

5 for each information object in the second set of information objects:

6 calculating an aggregate relevancy score for the information object by
7 aggregating the relevancy scores generated for the information object by applying the plurality of
8 selection techniques; and

9 selecting the information object to be included in the third set of
10 information objects if the aggregated relevancy score calculated for the information object is
11 above a threshold value.

1 7. (Previously Presented) The method of claim 1 wherein:
2 determining the degree of relevancy information for the second set of information
3 objects comprises:

4 identifying a first selection technique and a second selection technique for
5 determining the degree of relevancy information; and

6 applying the first selection technique to generate a first set of relevancy
7 scores for information objects in the second set of information objects, the first set of relevancy
8 scores indicating the relevancy of information objects in the second set of information objects to
9 information objects in the first set of information objects calculated using the first selection
10 technique;

11 applying the second selection technique to generate a second set of
12 relevancy scores for information objects in the second set of information objects, the second set
13 of relevancy scores indicating the relevancy of information objects in the second set of

information objects to information objects in the first set of information objects calculated using the second selection technique; and

selecting the third set of information objects comprises:
selecting one or more information objects from the second set of information objects to be included in the third set of information objects based upon the first set of relevancy scores and the second set of relevancy scores.

8. (Previously Presented) The method of claim 7 wherein applying the first selection technique to generate the first set of relevancy scores comprises:
determining a set of one or more concepts of interest to the user;
determining relevancy of each information object in the first set of information objects to each concept in the set of concepts;
determining relevancy of each information object in the second set of information objects to each concept in the set of concepts; and
calculating the first set of relevancy scores based upon the relevancy of each information object in the first set of information objects to each concept in the set of concepts and based upon the relevancy of each information object in the second set of information objects to each concept in the set of concepts, wherein each relevancy score in the first set of relevancy scores indicates a degree of relevancy of an information object in the second set of information objects to an information object in the first set of information objects for a particular concept included in the set of concepts.

9. (Previously Presented) The method of claim 7 wherein applying the second selection technique to generate the second set of relevancy scores comprises:
for each information object in the first set of information objects:
identifying a type of the information object based upon contents of the information object;
determining a comparison technique based upon the type of the information object; and

8 for each information object in the second set of information objects,
9 applying the comparison technique to generate a relevancy score for the information object in the
10 second set of information objects, the relevancy score indicating a degree of relevance of the
11 information object in the second set of information objects to the information object in the first
12 set of information objects using the comparison technique determined based upon the type of the
13 information object in the first set of information objects.

1 10. (Previously Presented) The method of claim 1 further comprising
2 communicating the third set of information objects to a user system which is used to output
3 information stored by information objects in the third set of information objects to the user.

1 11. (Previously Presented) The method of claim 1 wherein the first document
2 is displayed to the user using an access program and the information stored by information
3 objects in the third set of information objects is output to the user in a predetermined area of the
4 access program.

1 12. (Previously Presented) The method of claim 11 wherein the access
2 program is a web browser and the first document is a web page.

1 13. (Previously Presented) The method of claim 1 further comprising:
2 determining when a second document is displayed to the user instead of the first
3 document;
4 identifying at least a first section of the second document;
5 extracting a fourth set of one or more information objects from the first section of
6 the second document;
7 determining new degree of relevancy information for the second set of
8 information objects, the new degree of relevancy information indicating the relevancy of
9 information objects in the second set of information objects to information objects in the fourth
10 set of information objects; and

11 selecting a fifth set of one or more information objects from information objects
12 in the second set of information objects based upon the new degree of relevancy information
13 determined for the second set of information objects, wherein information objects in the fifth set
14 of information objects store information to be output to the user when the second document is
15 being displayed to the user.

1 14. (Currently amended) A computer-implemented method of providing
2 information to a user based upon contents of a document displayed to the user, the method
3 comprising:
4 accessing a first set of one or more content provider information objects (CPIOs);
5 extracting a set of one or more user document information objects (UDIOs) from
6 the document, the set of UDIOs comprising a first UDIO comprising information of a first type;
7 identifying a plurality of selection techniques for determining degree of relevancy
8 information for the first set of CPIOs, the first set of CPIOs comprising at least one information
9 object comprising information of a second type that is different from the first type, the plurality
10 of selection techniques comprising a first selection technique and a second technique, wherein
11 the first technique compares contents of the UDIOs and the CPIOs, wherein the second
12 technique determines relevancy of the UDIOs and the CPIOs to one or more concepts of interest
13 to a user;
14 for each selection technique in the plurality of selection techniques, applying the
15 selection technique to the UDIOs and the CPIOs to generate degree of relevancy information for
16 the CPIOs in the set of CPIOs, the degree of relevancy information indicating the relevancy of
17 the CPIOs to the UDIOs in the set of UDIOs calculated using the selection technique; and
18 selecting a second set of one or more CPIOs from the first set of CPIOs based
19 upon the degree of relevancy information for the CPIOs calculated using the plurality of
20 selection techniques, wherein information objects in the second set of CPIOs store information to
21 be output to the user when the document is being displayed to the user.

1 15. (Currently amended) A computer-program product stored on a computer
2 readable storage medium for providing information to a user based upon contents of a first
3 document displayed to the user, the computer-program product comprising:
4 code for identifying at least a first section of the first document;
5 code for extracting a first set of one or more information objects from the first
6 section of the first document, the first set of information objects comprising at least a first
7 information object comprising information of a first type, wherein the first information object is
8 one of an audio object, a video object, or an image object;
9 code for ~~determining degree of relevancy information for a second set of one or~~
10 ~~more information objects, the processing information objects in the first set of information~~
11 objects and information objects in a second set of information objects to determine a degree of
12 relevancy information indicating the relevancy of information objects in the second set of
13 information objects to information objects in the first set of information objects, wherein the
14 second set of information objects comprises at least one information object comprising
15 information of a second type, wherein the second type is different from the first type, and
16 wherein determining the degree of relevancy information comprises determining a degree of
17 relevancy of the at least one information object to the first information object from the first set of
18 information objects;
19 code for selecting a third set of one or more information objects from information
20 objects in the second set of information objects based upon the degree of relevancy information
21 determined for information objects in the second set of information objects, wherein information
22 objects in the third set of information objects store information to be output to the user when the
23 first document is being displayed to the user.

1 16. (Previously Presented) The computer-program product of claim 15
2 wherein the first section of the first document corresponds to a section of the first document
3 displayed to the user, wherein the section of the first document displayed to the user is less than
4 the entire first document.

1 17. (Previously Presented) The computer-program product of claim 15
2 wherein the first section of the first document corresponds to the entire first document.

1 18. (Previously Presented) The computer-program product of claim 15
2 wherein the code for extracting the first set of information objects from the first section of the
3 first document comprises:

4 for each information object in the first set of information objects:

5 code for identifying a type of the information object based upon contents
6 of the information object;

7 code for determining a first content recognition technique based upon the
8 type of the information object; and

9 code for applying the first content recognition technique to the information
10 object to determine information related to the contents of the information object.

1 19. (Previously Presented) The computer-program product of claim 15
2 wherein:

3 the code for determining the degree of relevancy information for the second set of
4 information objects comprises:

5 code for identifying a plurality of selection techniques for determining the
6 degree of relevancy information; and

7 for each selection technique in the plurality of selection techniques, code
8 for applying the selection technique to generate relevancy scores for the information objects in
9 the second set of information objects, the relevancy scores indicating the relevancy of
10 information objects in the second set of information objects to information objects in the first set
11 of information objects calculated using the selection technique; and

12 the code for selecting the third set of information objects comprises:

13 code for selecting one or more information objects from the second set of
14 information objects to be included in the third set of information objects based upon the

15 relevancy scores for information objects in the second set of information objects calculated using
16 the plurality of selection techniques.

1 20. (Previously Presented) The computer-program product of claim 19
2 wherein the code for selecting the one or more information objects from the second set of
3 information objects to be included in the third set of information objects based upon the
4 relevancy scores for information objects in the second set of information objects calculated using
5 the plurality of selection techniques comprises:
6 for each information object in the second set of information objects:
7 code for calculating an aggregate relevancy score for the information
8 object by aggregating the relevancy scores generated for the information object by applying the
9 plurality of selection techniques; and
10 code for selecting the information object to be included in the third set of
11 information objects if the aggregated relevancy score calculated for the information object is
12 above a threshold value.

1 21. (Previously Presented) The computer-program product of claim 15
2 wherein:
3 the code for determining the degree of relevancy information for the second set of
4 information objects comprises:
5 code for identifying a first selection technique and a second selection
6 technique for determining the degree of relevancy information; and
7 code for applying the first selection technique to generate a first set of
8 relevancy scores for information objects in the second set of information objects, the first set of
9 relevancy scores indicating the relevancy of information objects in the second set of information
10 objects to information objects in the first set of information objects calculated using the first
11 selection technique;
12 code for applying the second selection technique to generate a second set
13 of relevancy scores for information objects in the second set of information objects, the second
14 set of relevancy scores indicating the relevancy of information objects in the second set of

15 information objects to information objects in the first set of information objects calculated using
16 the second selection technique; and
17 the code for selecting the third set of information objects comprises:
18 code for selecting one or more information objects from the second set of
19 information objects to be included in the third set of information objects based upon the first set
20 of relevancy scores and the second set of relevancy scores.

1 22. (Previously Presented) The computer-program product of claim 21
2 wherein the code for applying the first selection technique to generate the first set of relevancy
3 scores comprises:
4 code for determining a set of one or more concepts of interest to the user;
5 code for determining relevancy of each information object in the first set of
6 information objects to each concept in the set of concepts;
7 code for determining relevancy of each information object in the second set of
8 information objects to each concept in the set of concepts; and
9 code for calculating the first set of relevancy scores based upon the relevancy of
10 each information object in the first set of information objects to each concept in the set of
11 concepts and based upon the relevancy of each information object in the second set of
12 information objects to each concept in the set of concepts, wherein each relevancy score in the
13 first set of relevancy scores indicates a degree of relevancy of an information object in the
14 second set of information objects to an information object in the first set of information objects
15 for a particular concept included in the set of concepts.

1 23. (Previously Presented) The computer-program product of claim 21
2 wherein the code for applying the second selection technique to generate the second set of
3 relevancy scores comprises:
4 for each information object in the first set of information objects:
5 code for identifying a type of the information object based upon contents
6 of the information object;

7 code for determining a comparison technique based upon the type of the
8 information object; and
9 for each information object in the second set of information objects, code
10 for applying the comparison technique to generate a relevancy score for the information object in
11 the second set of information objects, the relevancy score indicating a degree of relevance of the
12 information object in the second set of information objects to the information object in the first
13 set of information objects using the comparison technique determined based upon the type of the
14 information object in the first set of information objects.

1 24. (Previously Presented) The computer-program product of claim 15 further
2 code for communicating the third set of information objects to a user system which is used to
3 output information stored by information objects in the third set of information objects to the
4 user.

1 25. (Previously Presented) The computer-program product of claim 15 further
2 comprising code for outputting information stored by information objects in the third set of
3 information objects to the user in a predetermined area of an access program which is used to
4 display the first document to the user.

1 26. (Previously Presented) The computer-program product of claim 25
2 wherein the access program is a web browser and the first document is a web page.

1 27. (Previously Presented) The computer-program product of claim 15 further
2 comprising:
3 code for determining when a second document is displayed to the user instead of
4 the first document;
5 code for identifying at least a first section of the second document;
6 code for extracting a fourth set of one or more information objects from the first
7 section of the second document;

code for determining new degree of relevancy information for the second set of information objects, the new degree of relevancy information indicating the relevancy of information objects in the second set of information objects to information objects in the fourth set of information objects; and

code for selecting a fifth set of one or more information objects from information objects in the second set of information objects based upon the new degree of relevancy information determined for the second set of information objects, wherein information objects in the fifth set of information objects store information to be output to the user when the second document is being displayed to the user.

28. (Currently amended) A computer-program product stored on a computer readable storage medium for providing information to a user based upon contents of a document displayed to the user, the computer-program product comprising:

code for accessing a first set of one or more content provider information objects (CPIOs);

code for extracting a set of one or more user document information objects (UDIOs) from the document, the set of UDIOs comprising a first UDIO comprising information of a first type;

code for identifying a plurality of selection techniques for determining degree of relevancy information for the first set of CPIOs, the first set of CPIOs comprising at least one information object comprising information of a second type that is different from the first type, the plurality of selection techniques comprising a first selection technique and a second technique, wherein the first technique compares contents of the UDIOs and the CPIOs, wherein the second technique determines relevancy of the UDIOs and the CPIOs to one or more concepts of interest to a user;

for each selection technique in the plurality of selection techniques, code for applying the selection technique to the UDIOs and the CPIOs to generate degree of relevancy information for the CPIOs in the set of CPIOs, the degree of relevancy information indicating the

relevancy of the CPIOs to the UDIOs in the set of UDIOs calculated using the selection technique; and

code for selecting a second set of one or more CPIOs from the first set of CPIOs based upon the degree of relevancy information for the CPIOs calculated using the plurality of selection techniques, wherein information objects in the second set of CPIOs store information to be output to the user when the document is being displayed to the user.

29. (Currently amended) A system for providing information to a user based upon contents of a first document displayed to the user, the system comprising:

a processor;

a memory coupled to the processor, the memory configured to store a plurality of code modules for execution by the processor, the plurality of code modules comprising:

a code module for identifying at least a first section of the first document;

a code module for extracting a first set of one or more information objects from the first section of the first document, the first set of information objects comprising at least a first information object comprising information of a first type, wherein the first information object is one of an audio object, a video object, or an image object;

~~a code module for determining degree of relevancy information for a second set of one or more information objects, the processing information objects in the first set of information objects and information objects in a second set of information objects to~~
determine a degree of relevancy information indicating the relevancy of information objects in the second set of information objects to information objects in the first set of information objects, wherein the second set of information objects comprises at least one information object comprising information of a second type, wherein the second type is different from the first type, and wherein determining the degree of relevancy information comprises determining a degree of relevancy of the at least one information object to the first information object from the first set of information objects; and

a code module for selecting a third set of one or more information objects from information objects in the second set of information objects based upon the degree of

23 relevancy information determined for information objects in the second set of information
24 objects, wherein information objects in the third set of information objects store information to
25 be output to the user when the first document is being displayed to the user.

1 30. (Previously Presented) The system of claim 29 wherein the first section of
2 the first document corresponds to a section of the first document displayed to the user, wherein
3 the section of the first document displayed to the user is less than the entire first document.

1 31. (Previously Presented) The system of claim 29 wherein the first section of
2 the first document corresponds to the entire first document.

1 32. (Previously Presented) The system of claim 29 wherein the code module
2 for extracting the first set of information objects from the first section of the first document
3 comprises:

4 for each information object in the first set of information objects:
5 a code module for identifying a type of the information object based upon
6 contents of the information object;
7 a code module for determining a first content recognition technique based
8 upon the type of the information object; and
9 a code module for applying the first content recognition technique to the
10 information object to determine information related to the contents of the information object.

1 33. (Previously Presented) The system of claim 29 wherein:
2 the code module for determining the degree of relevancy information for the
3 second set of information objects comprises:
4 a code module for identifying a plurality of selection techniques for
5 determining the degree of relevancy information; and
6 for each selection technique in the plurality of selection techniques, a code
7 module for applying the selection technique to generate relevancy scores for information objects
8 in the second set of information objects, the relevancy scores indicating the relevancy of

9 information objects in the second set of information objects to information objects in the first set
10 of information objects calculated using the selection technique; and
11 the code module for selecting the third set of information objects comprises:
12 a code module for selecting one or more information objects from the
13 second set of information objects to be included in the third set of information objects based
14 upon the relevancy scores for information objects in the second set of information objects
15 calculated using the plurality of selection techniques.

1 34. (Previously Presented) The system of claim 33 wherein the code module
2 for selecting the one or more information objects from the second set of information objects to be
3 included in the third set of information objects based upon the relevancy scores for information
4 objects in the second set of information objects calculated using the plurality of selection
5 techniques comprises:
6 a code module for calculating an aggregate relevancy score for each information
7 object in the second set of information objects by aggregating the relevancy scores generated for
8 the information object by applying the plurality of selection techniques; and a code module for
9 selecting an information object from the second set of information objects to be included in the
10 third set of information objects if the aggregated relevancy score calculated for the information
11 object is above a threshold value.

1 35. (Previously Presented) The system of claim 29 wherein:
2 the code module for determining the degree of relevancy information for the
3 second set of information objects comprises:
4 a code module for identifying a first selection technique and a second
5 selection technique for determining the degree of relevancy information; and
6 a code module for applying the first selection technique to generate a first
7 set of relevancy scores for information objects in the second set of information objects, the first
8 set of relevancy scores indicating the relevancy of information objects in the second set of
9 information objects to information objects in the first set of information objects calculated using
10 the first selection technique;

11 a code module for applying the second selection technique to generate a
12 second set of relevancy scores for information objects in the second set of information objects,
13 the second set of relevancy scores indicating the relevancy of information objects in the second
14 set of information objects to information objects in the first set of information objects calculated
15 using the second selection technique; and

16 the code module for selecting the third set of information objects comprises:

17 a code module for selecting one or more information objects from the
18 second set of information objects to be included in the third set of information objects based
19 upon the first set of relevancy scores and the second set of relevancy scores.

1 36. (Previously Presented) The system of claim 35 wherein the code module
2 for applying the first selection technique to generate the first set of relevancy scores comprises:

3 a code module for determining a set of one or more concepts of interest to the
4 user;

5 a code module for determining relevancy of each information object in the first
6 set of information objects to each concept in the set of concepts;

7 a code module for determining relevancy of each information object in the second
8 set of information objects to each concept in the set of concepts; and

9 a code module for calculating the first set of relevancy scores based upon the
10 relevancy of each information object in the first set of information objects to each concept in the
11 set of concepts and based upon the relevancy of each information object in the second set of
12 information objects to each concept in the set of concepts, wherein each relevancy score in the
13 first set of relevancy scores indicates a degree of relevancy of an information object in the
14 second set of information objects to an information object in the first set of information objects
15 for a particular concept included in the set of concepts.

1 37. (Previously Presented) The system of claim 35 wherein the code module
2 for applying the second selection technique to generate the second set of relevancy scores
3 comprises:

4 for each information object in the first set of information objects:

5 a code module for identifying a type of the information object based upon
6 contents of the information object;

7 a code module for determining a comparison technique based upon the
8 type of the information object; and

9 for each information object in the second set of information objects, a
10 code module for applying the comparison technique to generate a relevancy score for the
11 information object in the second set of information objects, the relevancy score indicating a
12 degree of relevance of the information object in the second set of information objects to the
13 information object in the first set of information objects using the comparison technique
14 determined based upon the type of the information object in the first set of information objects.

1 38. (Previously Presented) The system of claim 29 wherein the plurality of
2 code modules further comprises:

3 a code module for communicating the third set of information objects to a user
4 system which is used to output information stored by information objects in the third set of
5 information objects to the user.

1 39. (Previously Presented) The system of claim 29 wherein the first document
2 is displayed to the user using an access program and information stored by information objects in
3 the third set of information objects is output to the user in a predetermined area of the access
4 program.

1 40. (Previously Presented) The system of claim 39 wherein the access
2 program is a web browser and the first document is a web page.

1 41. (Previously Presented) The system of claim 29 wherein the plurality of
2 code modules further comprises:

3 a code module for determining when a second document is displayed to the user
4 instead of the first document;

5 a code module for identifying at least a first section of the second document;

6 a code module for extracting a fourth set of one or more information objects from
7 the first section of the second document;

8 a code module for determining new degree of relevancy information for the
9 second set of information objects, the new degree of relevancy information indicating the
10 relevancy of information objects in the second set of information objects to information objects
11 in the fourth set of information objects; and

12 a code module for selecting a fifth set of one or more information objects from
13 information objects in the second set of information objects based upon the new degree of
14 relevancy information determined for the second set of information objects, wherein information
15 objects in the fifth set of information objects store information to be output to the user when the
16 second document is being displayed to the user.

1 42. (Currently amended) A system for providing information to a user based
2 upon contents of a document displayed to the user, the system comprising:

3 a user system displaying the first document to the user; and

4 a server system coupled to the user system;

5 wherein the server system is configured to:

6 access a first set of one or more content provider information objects
7 (CPIOs);

8 extract a set of one or more user document information objects (UDIOs)
9 from the document, the set of UDIOs comprising a first UDIO comprising information of a first
10 type;

11 identify a plurality of selection techniques for determining degree of
12 relevancy information for the first set of CPIOs, the first set of CPIOs comprising at least one
13 information object comprising information of a second type that is different from the first type,
14 the plurality of selection techniques comprising a first selection technique and a second
15 technique, wherein the first technique compares contents of the UDIOs and the CPIOs, wherein
16 the second technique determines relevancy of the UDIOs and the CPIOs to one or more concepts
17 of interest to a user;

18 for each selection technique in the plurality of selection techniques, apply
19 the selection technique to the UDIOs and the CPIOs to generate degree of relevancy information
20 for the CPIOs in the set of CPIOs, the degree of relevancy information indicating the relevancy
21 of the CPIOs to the UDIOs in the set of UDIOs calculated using the selection technique; and
22 select a second set of one or more CPIOs from the first set of CPIOs based
23 upon the degree of relevancy information for the CPIOs calculated using the plurality of
24 selection techniques; and
25 wherein the user system is configured to output information stored by the second
26 set of CPIOs to the user.

1 43. (Previously Presented) The system of claim 42 wherein at least one CPIO
2 included in the first set of CPIOs is provided by a content provider system coupled to the server
3 system.

1 44. (Previously Presented) The system of claim 42 wherein the first set of
2 CPIOs comprises a first CPIO and a second CPIO, wherein the first CPIO is provided by a first
3 content provider system coupled to the server system and the second CPIO is provided by a
4 second content provider system coupled to the server system.